CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/WNo.17/MK/BM/Agg.G/2014-15 03.05.2014

Aggregate Gradation Test

IS : 2386 Part I

Client	**Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.
Agency	**Mr. M. Krishnamurthy,** Contractor, Bangalore.
Name of the work	Providing and laying HDPE Water line in Ganesha Temple Block - IV in JP Park, Ward No. 17, BBMP, Bangalore.
Reference	EE/RRND/Wo. No./221/2013-14 Dated: 05.02.2014
Sample ID	Hotmix Plant
Type of Mix	Bituminous Macadam
Date of Testing	03.05.2014

Total Weight of Sample: 5350 gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
26.5	0	0	0	100	100	Gradation satisfies Grade-II MORTH specification
19	475	8.88	8.88	91.12	90-100	
13.2	1610	30.09	38.97	61.03	56-88	
4.75	1565	29.25	68.22	31.78	16-36	
2.36	859	16.06	84.28	15.72	4-19	
0.3	468	8.75	93.03	6.97	2-10	
0.075	153	2.86	95.89	4.11	0-8	

Total Weight of Sample: 5425 gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
26.5	0	0	0	100	100	Gradation satisfies Grade-II MORTH specification
19	312	5.75	5.75	94.25	90-100	
13.2	1795	33.09	38.84	61.16	56-88	
4.75	1856	34.21	73.05	26.95	16-36	
2.36	825	15.21	88.26	11.74	4-19	
0.3	356	6.56	94.82	5.18	2-10	
0.075	142	2.62	97.44	2.56	0-8	

Note:

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→ The results indicated above are based on the tests carried out on the samples received in the laboratory

→ Any Query regarding the report must be reported within 30 days from the date of testing

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QUALITY CONTROL REPORTS FOR

SEMI DENSE BITUMINOUS CONCRETE

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Job No: CTCE/BBMP/WNo.17/MK/SDBC(QB)/2014-15 03.05.2014

TEST REPORT ON DETERMINATION OF BITUMEN CHARACTERISTICS

CLIENT	:	**Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.
AGENCY	:	**Mr. M. Krishnamurthy,** Contractor, Bangalore.
NAME OF THE WORK	:	Providing and laying HDPE Water line in Ganesha Temple Block - IV in JP Park, Ward No. 17, BBMP, Bangalore.
REFERENCE	:	EE/RRND/Wo. No./221/2013-14 Dated: 05.02.2014
SAMPLE ID	:	Bitumen
DATE OF TESTING	:	03.05.2014

The results of the tests conducted on the bitumen sample using for Semi Dense Bituminous Concrete.

Sl. No	Description	Test Method as per IS	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	IS :1203 -1978 (RA-2009)	66	60 to 70
2	Softening point, ^{0}C	IS :1205 -1978 (RA-2009)	47	Min. 45
3	Ductility at 27^{0}C, cm	IS :1208 -1978 (RA-2009)	100 >	Min. 50
4	Flash Point, ^{0}C	IS :1209 -1978 (RA-2009)	292	Min. 220

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Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.
Agency	**Mr. M. Krishnamurthy,** Contractor, Bangalore.
Name of the Work	Providing and laying HDPE Water line in Ganesha Temple Block - IV in JP Park, Ward No. 17, BBMP, Bangalore.
Reference	EE/RRND/Wo. No./221/2013-14 Dated: 05.02.2014
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	03.05.2014

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	385	388	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	84	87	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	301	301	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	21.82	22.42	22.12

Comments:

→ Maximum allowable Aggregate Impact value for Semi Dense Bituminous Concrete is 27%

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